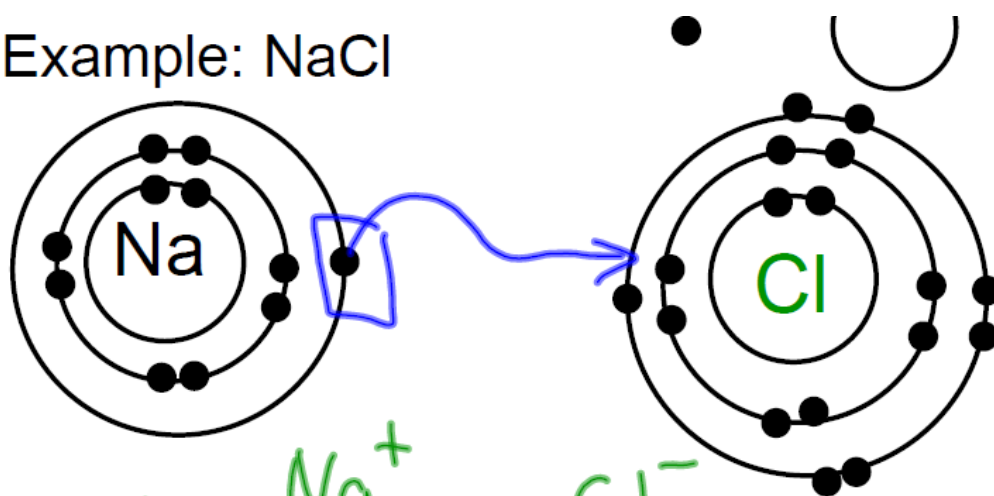


Ionic Compounds

Ionic compounds are made up of a metal and a non metal OR a cation and an anion.

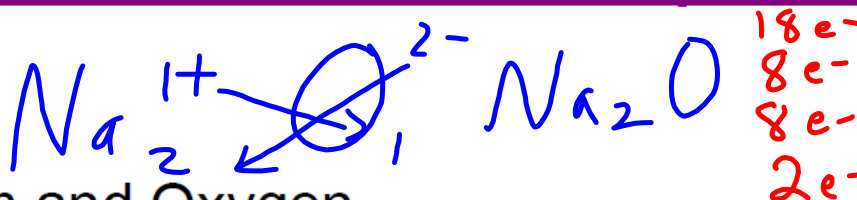
Example: NaCl



Na^+
 $\text{NaCl} \rightarrow$ formula
Sodium Chloride \rightarrow name
 Cl^-

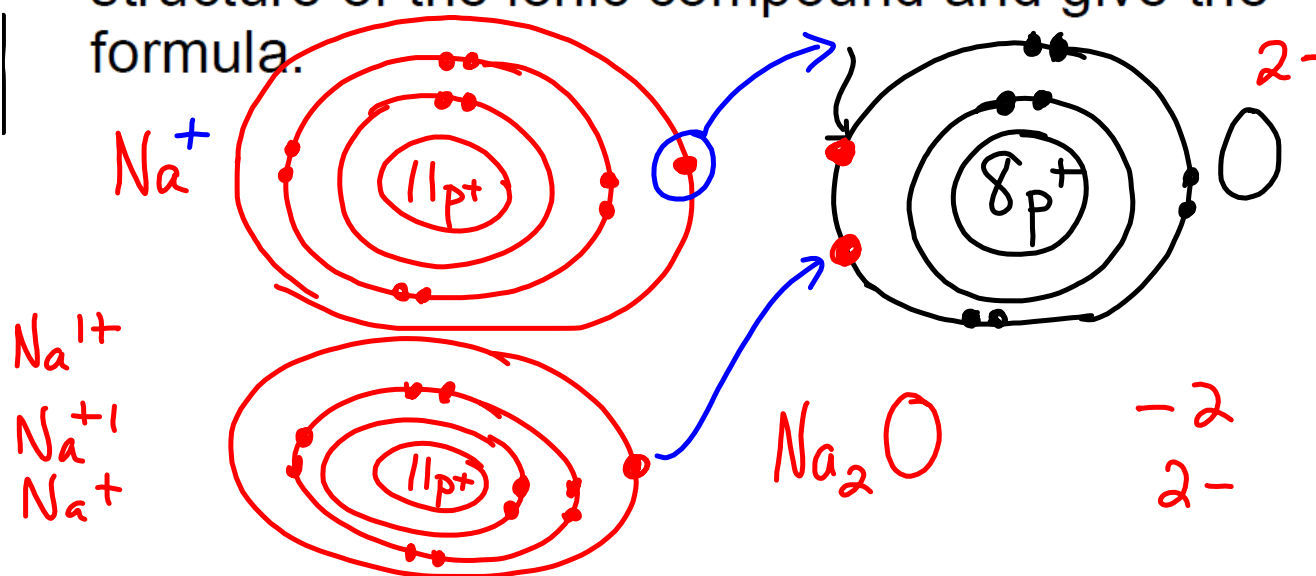
How Elements Form Compounds

Try:



Sodium and Oxygen

Draw the Bohr Diagram, determine the structure of the ionic compound and give the formula.

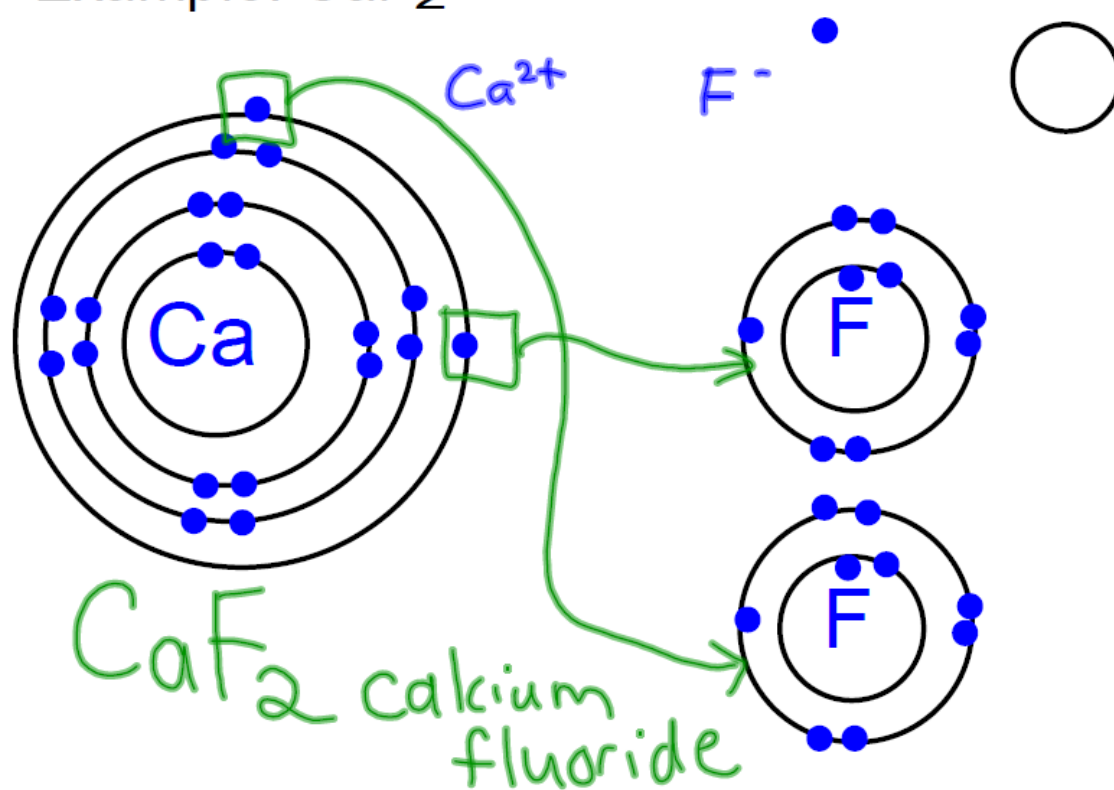


The Octet Rule: Atoms attempt to achieve the same structure as the nearest Noble Gas. Usually this means trying to have 8 in their valence orbit.

The Ionic Bond: Ions are completely different in nature and properties than the original atoms.

THE IONIC BOND results from the attraction between the cation and anion.

Example: CaF_2



Binary Ionic Compounds Nomenclature w/ oxidation numbers

1. The name of the cation (metal) is first. It will have its entire element name.
2. The anion (nonmetal) will have its element name with its -ide ending

For example

$\Sigma \times$ NaCl
Sodium chloride

Full name
+
ide ending

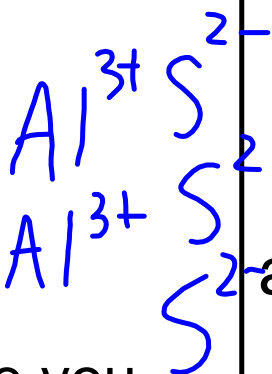
Finding the formula for ionic compounds

1. Write the symbol for each element.

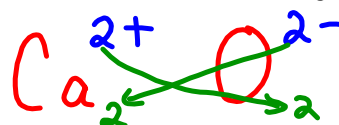
2. Write the charges using their location on periodic table

3. Crisscross

4. Reduce the subscripts (if necessary) like you would for a fraction

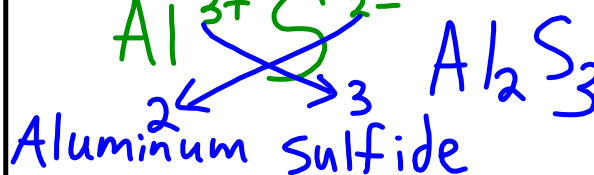
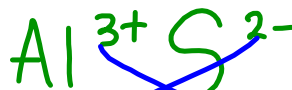


Ex.
calcium and oxygen



Calcium Oxide

aluminum and sulfur



Aluminum sulfide

Iodide Fluoride

Bromide Chloride

oxide phosphide

nitride